

WHAT IS CLAIMED IS:

1. A liquid crystal display device having a plurality of pixels, comprising:

a color filter substrate;

5 an active matrix substrate;

a liquid crystal layer provided between said color filter substrate and said active matrix substrate;

a plurality of video signal lines provided on said active matrix substrate;

10 a plurality of pixel electrodes provided on said active matrix substrate;

a plurality of common electrodes provided on said active matrix substrate;

15 a plurality of active elements connected to said pixel electrodes and said video signal lines;

wherein each of said pixel electrodes and common electrodes is bent two or more times for each pixel to form a zigzag shape.

2. A liquid crystal display device as defined in
20 Claim 1, wherein, when using liquid crystal of positive dielectric constant anisotropy, angles of bent of said pixel electrodes and common electrodes relative to the alignment direction of the liquid crystal are within a range from 0 to 30 degrees.

25 3. A liquid crystal display device as defined in Claim 1, wherein, when using liquid crystal of negative

dielectric constant anisotropy, angles of bent of said pixel electrodes and common electrodes relative to the alignment direction of the liquid crystal are within a range from 60 to 120 degrees except 90 degrees.

5 4. A liquid crystal display device having a plurality of pixels, comprising:

 a color filter substrate;

 an active matrix substrate;

10 a liquid crystal layer provided between said color filter substrate and said active matrix substrate;

 a plurality of video signal lines provided on said active matrix substrate;

 a plurality of pixel electrodes provided on said active matrix substrate;

15 a plurality of common electrodes provided on said active matrix substrate;

 a plurality of active elements connected to said pixel electrodes and said video signal lines;

20 wherein each of said pixel electrodes and common electrodes is bent one or more times for each pixel and wherein said video signal line is sandwiched by two common electrodes which are most adjacent to said video signal line.

25 5. A liquid crystal display device as defined in Claim 4, further includes a black mask on said color filter substrate for blocking lights, and wherein widths of

elements in the display device are expressed as:

(a) $W < BM < (W + 2l)$

(b) $W < l$

where W is a width of said video signal line, l is a
5 width of said common electrode most adjacent to said video
signal line, and BM is a width of said black mask.

6. A liquid crystal display device as defined in
Claim 4, wherein a width of said common electrodes most
adjacent to said video signal line is larger than that of
10 other common electrodes.

7. A liquid crystal display device having a plurality
of pixels, comprising:

a color filter substrate for mounting color
filters thereon;

15 an active matrix substrate;

a liquid crystal layer provided between said color
filter substrate and said active matrix substrate;

a plurality of video signal lines provided on said
active matrix substrate;

20 a plurality of pixel electrodes provided on said
active matrix substrate;

a plurality of common electrodes provided on said
active matrix substrate;

25 a plurality of active elements connected to said
pixel electrodes and said video signal lines;

wherein each of said color filters is bent two or

more times for each pixel in a zigzag manner.

8. A liquid crystal display device having a plurality of pixels, comprising:

a color filter substrate for mounting color
5 filters thereon;

an active matrix substrate;

a liquid crystal layer provided between said color
filter substrate and said active matrix substrate;

a plurality of video signal lines provided on said
10 active matrix substrate;

a plurality of pixel electrodes provided on said
active matrix substrate;

a plurality of common electrodes provided on said
active matrix substrate;

15 a plurality of active elements connected to said
pixel electrodes and said video signal lines;

wherein each of said pixel electrodes, common
electrodes, and video signal lines is bent two or more
times for each pixel to form a zigzag shape.

20 9. A liquid crystal display device as defined in
Claim 8, wherein, when using liquid crystal of positive
dielectric constant anisotropy, angles of bent of said pixel
electrodes, common electrodes and video signal lines
relative to the alignment direction of the liquid crystal
25 are within a range from 0 to 30 degrees.

10. A liquid crystal display device as defined in

Claim 8, wherein, when using liquid crystal of negative dielectric constant anisotropy, angles of bent of said pixel electrodes, common electrodes and video signal lines relative to the alignment direction of the liquid crystal are within a range from 60 to 120 degrees except 90 degrees.

11. A liquid crystal display device as defined in Claim 8, further includes a black mask on said color filter substrate for blocking lights, and wherein said color filters and said black mask are bent two or more times for each pixel in a zigzag manner.

12. A liquid crystal display device having a plurality of pixels, comprising:

a color filter substrate;

an active matrix substrate;

a liquid crystal layer provided between said color filter substrate and said active matrix substrate;

a plurality of video signal lines provided on said active matrix substrate;

a plurality of pixel electrodes provided on said active matrix substrate;

a plurality of common electrodes provided on said active matrix substrate;

a plurality of active elements connected to said pixel electrodes and said video signal lines;

wherein each of said pixel electrodes, common electrode and video signal lines is bent one or more

times for each pixel and wherein said video signal line is sandwiched by two common electrodes which are most adjacent to said video signal line.

13. A liquid crystal display device as defined in
5 Claim 12, further includes a black mask on said color filter substrate for blocking lights, and wherein widths of elements in the display device are expressed as:

$$(a) \quad W < BM < (W + 2l)$$

$$(b) \quad W < l$$

10 where W is a width of said video signal line, l is a width of said common electrode most adjacent to said video signal line, and BM is a width of said black mask.

14. A liquid crystal display device as defined in
15 Claim 12, wherein a width of said common electrodes most adjacent to said video signal line is larger than that of other common electrodes.

15. A liquid crystal display device as defined in
Claim 2, wherein said pixel electrodes and common electrodes are bent by two or more different angles for each pixel.

20 16. A liquid crystal display device as defined in
Claim 9, wherein said pixel electrodes, common electrodes and video signal lines are bent by two or more different angles for each pixel.

25 17. A liquid crystal display device as defined in
Claim 3, wherein said pixel electrodes and common electrodes are bent by two or more different angles for each pixel.

18. A liquid crystal display device as defined in Claim 10, wherein said pixel electrodes, common electrodes and video signal lines are bent by two or more different angles for each pixel.

5 19. A liquid crystal display device as defined in Claim 4, wherein a width of pixel electrodes and common electrodes is equal to or smaller than a liquid crystal cell gap where the liquid crystal cell gap represents a distance between said color filter substrate and said active matrix
10 substrate.

20. A liquid crystal display device as defined in Claim 12, wherein a width of pixel electrodes and common electrodes is equal to or smaller than a liquid crystal cell gap where the liquid crystal cell gap represents a distance
15 between said color filter substrate and said active matrix substrate.

21. A liquid crystal display device as defined in Claim 4, wherein at least either said pixel electrodes or said common electrodes are transparent and have conductivity
20 which is smaller than 10 ohm-centimeters.

22. A liquid crystal display device as defined in Claim 12, wherein at least either said pixel electrodes or said common electrodes are transparent and have conductivity which is smaller than 10 ohm-centimeters.

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